

## § 76.10-15

(ii) Be a uniform design for each hose diameter throughout the vessel.

(2) Each section of firehose must be lined commercial firehose that conforms to Underwriters' Laboratories, Inc. Standard 19 or Federal Specification ZZ-H-451E. Hose that bears the label of Underwriters' Laboratories, Inc. as lined firehose is accepted as conforming to this requirement.

[CGFR 65-50, 30 FR 16940, Dec. 30, 1965, as amended by CGFR 67-87, 32 FR 19181, Dec. 20, 1967; CGD 74-60, 41 FR 43151, Sept. 30, 1976; CGD 76-086, 44 FR 2392, Jan. 11, 1979; CGD 88-032, 56 FR 35825, July 29, 1991; CGD 95-012, 60 FR 48051, Sept. 18, 1995; CGD 95-027, 61 FR 26004, May 23, 1996; CGD 95-028, 62 FR 51204, Sept. 30, 1997]

## § 76.10-15 Piping.

(a) All piping, valves, and fittings shall meet the applicable requirements of subchapter F (Marine Engineering) of this chapter.

(b) All distribution cut-off valves shall be marked as required by § 78.47-15 of this subchapter.

(c) For vessels on an international voyage, the diameter of the fire main shall be sufficient for the effective distribution of the maximum required discharge from two fire pumps operating simultaneously. This is in addition to § 76.10-5(c). The discharge of this quantity of water through hoses and nozzles at a sufficient number of adjacent hydrants shall be at a minimum Pitot tube pressure of approximately 50 pounds per square inch.

## § 76.10-90 Installations contracted for prior to May 26, 1965.

(a) Installations contracted for prior to May 26, 1965, shall meet the following requirements:

(1) Except as specifically modified by this paragraph, the requirements of §§ 76.10-5 through 76.10-15 shall be complied with insofar as the number and general type of equipment is concerned. Existing equipment, except firehose nozzles and low-velocity water spray applicators, previously approved but not meeting the applicable requirements of §§ 76.10-5 through 76.10-15 may be continued in service so long as they are maintained in good condition to the satisfaction of the Officer in Charge, Marine Inspection. Minor re-

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pairs, alterations, and replacements may be permitted to the same standards as the original installation. However, all new installations or major replacements shall meet the applicable requirements in this part.

(2) All vessels contracted for prior to November 19, 1952, shall be fitted with fire pumps, hoses, and nozzles in accordance with table 76.10-90(a)(2).

TABLE 76.10-90(A)(2)

Gross tons		Minimum number of pumps	Minimum hose and hydrant size, inches	Nozzle orifice size, inches	Length of hose, feet
Over	Not over				
100 .....	4,000	2	1 1/2	1 5/8	150
4,000 .....	.....	3	1 1/2	1 5/8	150

<sup>1</sup>May use 50 feet of 2 1/2-inch hose with 7/8-inch nozzles for exterior stations. May use 75 feet of 1 1/2-inch hose with 5/8-inch nozzles for interior station in which case such interior stations shall have siamese connections.

(3) When reasonable and practicable, where two or more fire pumps are required, they shall not all be located in the same space. Vessels on an international voyage shall, however, comply with the requirements of § 76.10-5(h).

(4) The general requirements of § 76.10-5(c) through (h), § 76.10-10(d) through (i), and § 76.10-15, shall be complied with insofar as is reasonable and practicable. In addition, vessels on an international voyage shall comply with the requirements of § 76.10-5(b).

(5) Vessels on an international voyage shall comply with the requirements of § 76.10-3.

(6) Firehose nozzles and low-velocity spray applicators must meet the requirements of §§ 76.10-10(j), 76.10-10(k), and 76.10-10(l).

(b) Reserved

[CGFR 65-50, 30 FR 16940, Dec. 30, 1965, as amended by CGFR 67-87, 32 FR 19181, Dec. 20, 1967; CGD 76-086, 44 FR 2392, Jan. 11, 1979; CGD 95-027, 61 FR 26004, May 23, 1996]

## Subpart 76.13—Steam Smothering Systems

### § 76.13-1 Application.

Steam smothering systems are not permitted on vessels contracted for on or after January 1, 1962. Previously approved installations may be retained as long as they are maintained in good

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condition to the satisfaction of the Officer in Charge, Marine Inspection.

[CGD 95-027, 61 FR 26004, May 23, 1996]

### § 76.13-90 Installations contracted for prior to January 1, 1962.

(a) Installations contracted for prior to July 1, 1935, shall meet the following requirements:

(1) Existing arrangements, materials, and facilities previously approved will be considered satisfactory so long as they meet the minimum requirements of this paragraph and they are maintained in good condition to the satisfaction of the Officer in Charge, Marine Inspection. Minor repairs and alterations may be made to the same standard as the original installation.

(2) The main pipes and their branches to the cargo compartments and similar spaces shall be not less than 1½-inch pipe size and shall emanate from not more than two stations in easily accessible locations. If located on the open deck, the distribution manifolds shall be suitably protected by an enclosing cabinet or casing which shall be marked as required by § 78.47-17 of this subchapter. Each branch line shall have a valve at the manifold which shall be marked as required by § 78.47-15 of this subchapter.

(3) Branches to paint lockers and similar small spaces may be taken from the nearest steam supply line and shall be not less than ¾-inch pipe size. The valve shall be marked as required by § 78.47-15 of this subchapter.

(b) Installations contracted for on or after July 1, 1935, but prior to November 19, 1952, shall meet the following requirements:

(1) Existing arrangements, materials and facilities previously approved will be considered satisfactory so long as they meet the minimum requirements of this paragraph and they are maintained in good condition to the satisfaction of the Officer in Charge, Marine Inspection. Minor repairs, and alterations may be made to the same standard as the original installation.

(2) Steam shall be available from the main or auxiliary boilers to provide at least one pound of steam per hour for each 50 cubic feet of gross volume of the largest compartment protected. Where reasonable and practicable, the

steam pressure shall be at least 100 p.s.i.

(3) The piping system shall meet the general requirements of paragraphs (c)(5) through (12) of this section insofar as is reasonable and practicable.

(4) The minimum size of distribution piping and the number of branches to the various spaces shall be as given in table 76.13-90(b)(4) or by the following formula:

$$D = \sqrt{C/30,000}$$

(1)

where:

$D$ =Required diameter of pipe in inches.

$C$ =Volume of compartment in cubic feet.

TABLE 76.13-90(B)(4)

Volume of compartment in cubic feet		Number of branches to compartment	Pipe size of each branch, inches
Over	Not over		
.....	30,000	1	1
30,000 .....	46,000	1	1¼
46,000 .....	67,000	1	1½
67,000 .....	94,000	.....	1¼
94,000 .....	135,000	2	1½
135,000 .....	203,000	3	1½

(5) The minimum size of the steam supply line from the boiler to the distribution and manifold shall be as given by the following formula:

$$D = \sqrt{C/60,000}$$

(2)

where:

$D$ =Diameter of pipe in inches.

$C$ =Volume of all compartments in cubic feet.

(c) Installations contracted for on or after November 19, 1952, but prior to January 1, 1962, shall meet the following requirements:

(1) Existing arrangements, materials and facilities previously approved will be considered satisfactory so long as they meet the minimum requirements of this paragraph and they are maintained in good condition to the satisfaction of the Officer in Charge, Marine Inspection. Minor repairs and alterations may be made to the same standard as the original installation.

(2) Steam shall be available from main or auxiliary boilers to provide at least one pound of steam per hour for each 12 cubic feet of the gross volume